


SAFETY DATA SHEET (SDS)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	5.25% Sodium Hypochlorite
Commercial Name / Description:	5.25% QT Chlorite
Product Code:	QT35X5
Product Configuration:	Bag In Bottle Dispenser, Non-Bag in Bottle Trigger Spray, Screw Cap Bottles
Manufacturer Name:	QUANTUMTEC (A Life Science Solutions Division of PMA Manufacturing Sdn. Bhd.)
Product Use:	Industrial, Manufacturing and/or Laboratory Use
Address:	11, Lintang Beringin 3, Diamond Valley, 11960 Bayan Lepas, Penang, Malaysia.
General Phone No.:	+604-626 5518
Emergency Contact No.:	+604-626 5518
Email Address:	pmasales@pma-asia.com

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA Hazards:	Target Organ Effect, Irritant
GHS Pictograms:	
Signal Word:	DANGER!
GHS Classifications:	Skin Irritation – Category 2
	Eye Irritation – Category 1
	Specific Target Organ toxicity – Single Exposure – Category 3 (Respiratory Tract Irritation)
	Toxic to aquatic life – Category 1
GHS Label Elements, Including Precautionary Elements (The code refers to GHS Standard)	
Hazard Statement:	H316 – Causes mild skin irritation
	H319 – Cause serious eye irritation
	H401 – Toxic to aquatic life
	H412 – Harmful to aquatic life with long lasting effects

Precautionary Statements:	P280 - Wear protective gloves, protective clothing, eye protection and face protection.
	P261 - Avoid breathing vapours / spray.
	P403+233 - Store in a well-ventilated place. Keep container tightly closed.
	P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, get medical advice/attention.
	P304+312+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a doctor if you feel unwell.
	P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P273 – Avoid release to the environment
	P501 - Dispose of contents / container in accordance with Local, State, Federal and Provincial regulations
Emergency Overview:	DANGER!
Route of Exposure:	Eyes, Skin and Inhalation.
Potential Health Effects:	Eye: Eye contact with product or vapors may result in irritation, redness, and blurred vision. May cause pain disproportionate to the level of irritation to eye tissues. Vapor may cause eye irritation experienced as mild discomfort and redness. May cause moderate corneal injury.
	Skin: Repeated and/or prolonged exposure may cause irritation, dryness and/or cracking. Prolonged skin contact is unlikely to result in absorption of harmful amounts.
	Inhalation: Inhalation of vapors, fumes or mists of the product may be irritating to the respiratory system. Excessive exposure (400 ppm) may cause eye, nose and throat irritation. Higher levels may cause incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest, and death may follow a longer duration and higher levels. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death.
	Ingestion: May cause irritation. Ingesting large amounts may cause injury. May cause central nervous system depression, nausea and vomiting. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation. Repeated or prolonged inhalation may cause toxic effects.
Signs / Symptoms:	Signs and symptoms of excessive exposure include prolonged irritation, facial flushing, low blood pressure, and irregular heartbeats.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	w/v (Weight by Volume)	Formula
Sodium Hypochlorite	7681-52-9	5.25%	NaClO
Water	7732-18-5	94.75%	H ₂ O

SECTION 4: FIRST-AID MEASURES

Eye Contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Skin Contact:	IF ON SKIN (or hair): Remove all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs, get medical advice/attention.
Inhalation:	IF INHALED: Move victim to an open area with fresh air and keep at rest in a position comfortable for breathing. Call a doctor/physician if you feel unwell.
Ingestion:	IF SWALLOWED: Do NOT induce vomiting. Call a doctor immediately. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point:	Not Applicable
Auto Ignition Temperature:	Not Applicable
Flammability:	Non-flammable and non-combustible
Fire Hazards:	May decompose, generating irritating chlorine gas.
Explosive hazards:	Not explosive
Fire Fighting Media and Instructions:	Extinguishing Media: Water fog, Foam. Dry chemical powder. Carbon dioxide.
	Small Fires: Use carbon dioxide, or water spray.
	Large Fires: Use flooding quantities of water as fog.
Special Remarks:	DO NOT USE MONO AMMONIUM PHOSPHATE (MAP) fire extinguishers. Such use may cause explosion with release of toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Protection:	Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use product in well-ventilated area.
Environmental Precautions:	Avoid runoff into sewers, ditches, waterways or onto grounds. Comply with all government regulations on reporting releases.
Methods for Cleanup and Containment:	Soak up spills with absorbent material (e.g. cloth). Clean surface thoroughly to remove residual contamination (if any). Place in a suitable container for proper disposal. Use appropriate protective apparel as described in Section 8. Avoid contact with skin and eyes.

SECTION 7: HANDLING AND STORAGE

Handling:	Avoid contact with skin or eyes. Do not ingest. Avoid inhalation of vapor or mist. Mix only with water in accordance with label directions. Mixing with incompatible materials (such as acids, ammonia compounds, organic material, hydrogen peroxide or water reactive material) will result in the release of chlorine gas, which is irritating to eyes, lungs and mucous membrane.
Storage:	Store in cool, well-ventilated area that is away from heat. Keep container closed when not in use.

Hygiene Practices:	Wash thoroughly with soap and water after handling.
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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.																								
Eye/Face Protection:	Safety glasses with side shields if contact with eyes is possible. If splash hazard exists, wear chemical splash goggles and/or face shield.																								
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data. Butyl rubber, neoprene or nitrile gloves is suitable for handling this chemical.																								
Respiratory Protection:	Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits have been exceeded or if irritation or other symptoms are experienced.																								
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.																								
EXPOSURE GUIDELINES:	<table border="1"> <thead> <tr> <th>No</th> <th>Exposure Limit</th> <th>Sodium Hypochlorite</th> <th>Chlorine (Decomposition)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>AIHA / WEEL</td> <td>1 mg/m³ for 15 minutes</td> <td>Not established</td> </tr> <tr> <td>2</td> <td>ACGIH STEL</td> <td>Not established</td> <td>1 ppm</td> </tr> <tr> <td>3</td> <td>NIOSH / IDLH</td> <td>Not established</td> <td>10 ppm</td> </tr> <tr> <td>4</td> <td>OSHA STEL</td> <td>Not established</td> <td>1 ppm as Cl₂</td> </tr> <tr> <td>5</td> <td>NIOSH</td> <td>Not established</td> <td>0.5ppm</td> </tr> </tbody> </table>	No	Exposure Limit	Sodium Hypochlorite	Chlorine (Decomposition)	1	AIHA / WEEL	1 mg/m ³ for 15 minutes	Not established	2	ACGIH STEL	Not established	1 ppm	3	NIOSH / IDLH	Not established	10 ppm	4	OSHA STEL	Not established	1 ppm as Cl ₂	5	NIOSH	Not established	0.5ppm
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State Appearance:	Yellowish liquid
Odor:	Pungent chlorine-like
Odor Threshold:	0.9 mg/m ³
Freezing Point:	-7.5°C (-18°F)
Boiling Point:	Decomposes at 110°C (230°F)
Melting Point:	Not applicable
Flash Point:	No information available
Vapor Pressure:	17.5 mm Hg @ 20°C (68°F)
Vapor Density:	No data available
Relative Density:	1.08 g/mL @ 20°C (68°F)
Solubility in water:	Mixes infinitely with water
Decomposition Temperature:	Decomposes @ 110°C (230°F)

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions
Instability / Decomposition Temperature:	For every 10°C increase in storage temperature, decomposition increases by approximately 3.5-fold
Conditions to Avoid:	Keep away from heat and ultraviolet light.
Incompatible Materials:	Oxidizing agents, acids, nitrogen containing organics, metals, iron, copper, nickel, cobalt, organic materials, hydrogen peroxide and ammonia compounds, water reactive material
Special remark on reactivity:	May release chlorine gas and chlorinated organics which are toxic and/or carcinogenic if mixed with incompatible material

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry:	Eyes, skin, ingestion, dermal absorption.
Acute Toxicity:	Oral toxicity (LD ₅₀): > 8200mg/kg (rat) Dermal Toxicity (LD ₅₀): > 10 0000 mg/kg (rabbit) Primary eye irritation: Corrosive Primary Skin Irritation: Corrosive
Chronic Effects (Human Risk Assessment)	Based on toxicity profile and exposure scenarios for sodium hypochlorite. EPA concludes that the risks from chronic and sub-chronic exposure to low levels of these chemicals are minimal and without consequences to human health.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Sodium hypochlorite is low in toxicity to avian wildlife, but it is highly toxic to freshwater fish and invertebrates. Freshwater Fish Toxicity: <ul style="list-style-type: none"> - Atlantic Herring : LC₅₀ = 0.033 to 0.097 mg/l/96hr - Shiner Perch : LC₅₀ = 0.045 to 0.098 mg/l/96hr - Pink Salmon : LC₅₀ = 0.023 to 0.052 mg/l/96hr Invertebrate Toxicity: <ul style="list-style-type: none"> - Water Flea : LC₅₀ = 0.006 mg/l/24hr - Fresh Water Shrimp : LC₅₀ = 0.4 mg/l/96hr
Environmental Fate:	In fresh water, sodium hypochlorite breaks down rapidly into non-toxic compounds when exposed to sunlight.
Biodegradation:	This material is inorganic and not subject to biodegradation.
Bioconcentration:	This material is not expected to bioconcentrate in organisms.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:	Avoid release to the environment. Consult with your state, local, or provincial waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
Contaminated:	Do not reuse containers without proper cleaning or reconditioning.

SECTION 14: TRANSPORT INFORMATION

DOT UN Number:	UN 1791
DOT Shipping Name:	HYPOCHLORITE SOLUTION
DOT Hazard Class:	8
DOT Packing Group:	III
Marine Pollutant:	Yes
IMDG UN Number:	UN 1791
IMDG Shipping Name:	HYPOCHLORITE SOLUTION
IMDG Hazard Class:	8
IMDG Packing Group:	III
Marine Pollutant:	Yes
IATA UN Number:	UN 1791
IATA Shipping Name:	HYPOCHLORITE SOLUTION
IATA Hazard Class:	8
IATA Packing Group:	III
Marine Pollutant:	Yes

SECTION 15: REGULATORY INFORMATION

Canada WHMIS:	Classification: E (Corrosive Materials) <ul style="list-style-type: none"> • E – Corrosive to skin • E – TDG class 8 – corrosive substance
TSCA Inventory Status:	Listed (This product is not subjected to export notification)
Canada DSL:	Listed
EPA Registration #:	10897-108

SECTION 16: ADDITIONAL INFORMATION

HMIS Ratings:	HMIS Health Hazard: 2 HMIS Fire Hazard: 0 HMIS Physical Hazard: 1 HMIS Personal Protection: See Section 8
M/SDS Creation Date:	17 Dec 2019
M/SDS Revision Date:	25 Jul 2023

Disclaimer:

The contents in this Safety Data Sheet are correct to our knowledge at the date of its creation. However, neither the above-named supplier assumes any liability whatsoever for the accuracy or completeness of the information contained. Data herein relates to the specific material designated herein and does not relate to the use in combination with other material or in any process. Final determination of suitability of any material is the sole responsibility of the user.